

SEQUENCE LISTING

<110> Sato, Taka-Aki

<120> GENE ENCODING NADE, P75NTR-ASSOCIATED CELL DEATH EXECUTOR AND USES THEREOF

<130> 0575/59131-A-PCT-US

<140> 10/018,169

<141> 2001-12-07

<160> 45

<170> PatentIn version 3.1

<210> 1

<211> 36

<212> DNA

<213> Mouse

<400> 1 aattgtctac gcatccttat gggggagctg tctaac

36

<210> 2

<211> 12

<212> PRT

<213> Mouse

<400> 2

Asn Cys Leu Arg Ile Leu Met 1 5	Gly Glu Leu Ser Asn 10			
<210> 3				
<211> 30				
<212> DNA				
<213> Artificial Sequence				
<220>				
<223> Mouse Nade DNA				
<400> 3 ctagctagca tcatggtgag caaggg	acaaa	30		
	3 -3-3			
<210> 4				
<211> 28				
<212> DNA				
<213> Artificial Sequence				
<220>				
<223> Mouse Nade DNA				
<400> 4 ccgctcgagt cttgtacagc tcgtcc	cat	28		
cogologagi oligiadago logicoal .				
<210> 5				
<211> 29				
<212> DNA				
<213> Artificial Sequence				
<220>				
<223> Mouse Nade DNA				
<400> 5 atcctcgagc gatcatggcc aatgtccac 29				

<210>	6	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Mouse Nade DNA	
<400> atcgga	6 toot otcagotgta gotocot	27
<210>	7	
	27	
<212>		
	Artificial Sequence	
	•	
<220>		
<223>	Mouse Nade DNA	
<400>	7	07
accyga	toog atotototoa totooto	27
<210>	8	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Mouse Nade DNA	
<400> aaagct	8 tagg gaggcacagc tgagaaa	27
<210>	9	

```
<211> 27
<212> DNA
<213> Artificial Sequence
<220>
<223> Mouse Nade DNA
<400> 9
tttctcagct gtgcctccct aagcttt
                                                                    27
<210> 10
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Mouse Nade DNA
<400> 10
atccggagaa aggctaggga ggcaca
                                                                    26
<210> 11
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Mouse Nade DNA
<400> 11
tgtgcctccc tagcctttct ccggat
                                                                    26
<210> 12
<211> 124
<212> PRT
```

. . .

<400> 12

Met Ala Asn Val His Gln Glu Asn Glu Glu Met Glu Gln Pro Leu Gln 1 5 10 15

Asn Gly Glu Glu Asp Arg Pro Val Gly Gly Gly Glu Gly His Gln Pro
20 25 30

Ala Gly Asn Asn Asn Asn Asn His Asn His Asn His Asn His His 35 40 45

Arg Arg Gly Gln Ala Arg Arg Leu Ala Pro Asn Phe Arg Trp Ala Ile 50 55 60

Pro Asn Arg Gln Met Asn Asp Gly Leu Gly Gly Asp Gly Asp Met 65 70 75 80

Glu Met Phe Met Glu Glu Met Arg Glu Ile Arg Arg Lys Leu Arg Glu 85 90 95

Leu Gln Leu Arg Asn Cys Leu Arg Ile Leu Met Gly Glu Leu Ser Asn 100 105 110

His His Asp His His Asp Glu Phe Cys Leu Met Pro 115 120

<210> 13

<211> 111

<212> PRT

<213> Human

<400> 13

Met Ala Asn Ile His Gln Glu Asn Glu Glu Met Glu Gln Pro Met Gln 1 5 10 15

Asn Gly Glu Glu Asp Arg Pro Leu Gly Gly Gly Glu Gly His Gln Pro 20 25 30

Ala Gly Asn Arg Arg Gly Gln Ala Arg Arg Leu Ala Pro Asn Phe Arg 35 40 45

Trp Ala Ile Pro Asn Arg Gln Ile Asn Asp Gly Met Gly Gly Asp Gly 50 55 60

Asp Asp Met Glu Ile Phe Met Glu Glu Met Arg Glu Ile Arg Arg Lys 65 70 75 80

Leu Arg Glu Leu Gln Leu Arg Asn Cys Leu Arg Ile Leu Met Gly Glu 85 90 95

Leu Ser Asn His His Asp His His Asp Glu Phe Cys Leu Met Pro 100 105 110

<210> 14

<211> 13

<212> PRT

<213> Mouse

<400> 14

<210> 15

<211> 13

<212> PRT

<213> Mouse

<400> 15

<210> 16

<211> 10

```
<212> PRT
```

<213> Mouse

<400> 16

Leu Ala Leu Lys Leu Ala Gly Leu Asp Ile 1 5 10

<210> 17

<211> 9

<212> PRT

<213> Mouse

<400> 17

Leu Pro Val Leu Glu Asn Leu Thr Leu 1 5

<210> 18

<211> 9

<212> PRT

<213> Mouse

<400> 18

Leu Pro Pro Leu Glu Arg Leu Thr Leu 5

<210> 19

<211> 12

<212> PRT

<213> Mouse

<400> 19

```
<210> 20
<211> 13
<212> PRT
<213> Mouse
<400> 20
Glu Val Asp Gln Leu Arg Leu Glu Arg Leu Gln Ile Asp
<210> 21
<211> 8
<212> PRT
<213> Mouse
<400> 21
Leu Pro Leu Gly Lys Leu Thr Leu 1 5
<210> 22
<211> 14
<212> PRT
<213> Human
<400> 22
Ala Leu Ser Ala Gln Leu Tyr Ser Ser Leu Ser Leu Asp Ser
                                  10
<210> 23
<211> 13
```

<212> PRT

Lys Val Ala Glu Lys Leu Glu Ala Leu Ser Val Arg

```
<213> Mouse
```

<400> 23

Arg Glu Ile Arg Arg Lys Leu Arg Glu Leu Gln Leu Arg 1 $$ 5 $$ 10

<210> 24

<211> 13

<212> PRT

<213> Mouse

<400> 24

<210> 25

<211> 27

<212> PRT

<213> Mouse

<400> 25

Arg Glu Ile Arg Arg Lys Leu Arg Glu Leu Gln Leu Arg Asn Cys Leu 1 5 10 15

Arg Ile Leu Met Gly Glu Leu Ser Asn His His

<210> 26

<211> 27

<212> PRT

<213> Human

Arg Glu Ile Arg Arg Lys Leu Arg Glu Leu Gln Leu Arg Asn Cys Leu $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Arg Ile Leu Met Gly Glu Leu Ser Asn His His 20 25

<210> 27

<211> 8

<212> PRT

<213> Mouse

<400> 27

Arg Leu Leu Asn Arg Leu Leu Asn 1

<210> 28

<211> 700

<212> DNA

<400>

<213> Mouse

28

acgagegtet ggecageage teggagetee tetgegegeg gegggetgge agegggeeeg 60 aggcgagcgg gacagattga ctggaagccg agagtccagg cggcagcggg aattgacagg 120 aggactacgc cgcaagggat aggcccagaa tagcaaccag gaaacaaaat ctcatcatgg 180 ccaatgtcca ccaggaaaac gaagagctgg agcagccct gcagaatgga caggaagacc 240 gccctgtggg aggaggtgag ggccaccagc ctgctgcaaa caacaacaac aacaaccaca 300 accataacca caaccaccac cgaagaggcc aggctcgccg acttgcccct aacttccgat 360 gggccattcc caacaggcag atgaatgacg ggttgggtgg agatggagat gatatggaaa 420 tgttcatgga ggagatgaga gagatccgga gaaagcttag ggagctacag ctgagaaatt 480 gtctacgcat ccttatgggg gagctgtcta accaccacga tcaccatgat gaattctgcc 540

600

ttatgccttg acttcggtca ttcccccctg agatccatac tgtgactccc gctgtagccc

ttttcc	tcgc attttcctga	catgccttta	atgacccgtt	tgtggtgagc	cttgtgttat	660
ttccat	gcca tgtgccaggt	ggggcttgtg	ttgccagtga			700
<210>	29					
<211>	891					
<212>	DNA					
<213>	Human					

<400> 29						
	ccactcctat	accggtcctc	cattttggtg	cctgcaaagc	tctgggaaag	60
aatcccggga	aacgaaaaat	ggtgggtttg	ggggaaggga	ggtaagggga	gaaagctgga	120
gggaggggct	ttaattggag	gccccgtaga	ggacgcgcgg	aacttctaag	gtgggaaaaa	180
acgaaattaa	aaaatccttt	gatatcaggg	ctctgaatcc	tgctggtcag	agcaccaagc	240
attcagtctc	tctccttgcc	tttgtcttac	ttgtgttcaa	agaaaaacaa	ccagaaaaaa	300
aaaatctcat	catggcaaat	attcaccagg	aaaacgaaga	gatggagcag	cctatgcaga	360
atggagagga	agaccgccct	ttgggaggag	gtgaaggcca	ccagcctgca	ggaaatcgac	420
ggggacaggc	tcgccgactt	gcccctaatt	ttcgatgggc	catacccaat	aggcagatca	480
atgatgggat	gggtggagat	ggagatgata	tggaaatatt	catggaggag	atgagagaaa	540
tcagaagaaa	acttagggag	ctgcagttga	ggaattgtct	gcgtatcctt	atgggggagc	600
tctctaatca	ccatgaccat	catgatgaat	tttgccttat	gccttgactc	ctgccattta	660
tcatgagatt	aatactgtga	ttcccgctgt	tttcttttc	cttgcatttt	cctaatatgc	720
ctttactgat	ccgtttgctg	tgaaccctat	gttatttcca	tgtgtcaagt	gggtcttgtg	780
ttgccagctt	ctatttgaag	attgcctttg	cactcagtgt	aagtttctgt	cagcagtagt	840
ttcacccatt	tgcatggaaa	aatttaaagc	taataaagca	atttaaaaag	С	891

<210> 30

<211> 128

<212> PRT

<213> Mouse

<400> 30

His Gln Lys Lys Glu Glu Lys Glu Glu Lys Pro Gln Asp Thr Ile Arg \cdot 20 \cdot 25 \cdot 30

Arg Glu Pro Ala Val Ala Leu Ile Ser Glu Ala Gly Lys Asn Cys Ala $35 \hspace{1cm} 40 \hspace{1cm} 45$

Pro Arg Gly Gly Arg Arg Phe Arg Val Arg Gln Pro Ile Ala His 50 55 60

Tyr Arg Trp Asp Leu Met Gln Arg Val Gly Glu Pro Gln Gly Arg Met 70 75 80

Arg Glu Glu Asn Val Gln Arg Phe Gly Gly Asp Val Arg Gln Leu Met 85 90 95

Glu Lys Leu Arg Glu Arg Gln Leu Ser His Ser Leu Arg Ala Val Ser 100 105 110

Thr Asp Pro Pro His His Asp His His Asp Glu Phe Cys Leu Met Pro 115 120 125

<210> 31

<211> 128

<212> PRT

<213> Mouse

<400> 31

Met Glu Ser Lys Glu Glu Arg Ala Leu Asn Asn Leu Ile Val Glu Asn 1 5 10 15

Val Asn Glu Glu Asn Asp Glu Lys Asp Glu Lys Glu Gln Val Ala Asn 20 25 30

Lys Gly Glu Pro Leu Ala Leu Pro Leu Asn Val Ser Glu Tyr Cys Val 35 40 45

Pro Arg Gly Asn Arg Arg Phe Arg Val Arg Gln Pro Ile Leu Gln 50 55 60

Tyr Arg Trp Asp Ile Met His Arg Leu Gly Glu Pro Gln Ala Arg Met 65 70 75 80

Arg Glu Glu Asn Met Glu Arg Ile Gly Glu Glu Val Arg Gln Leu Met 85 90 95

Glu Lys Leu Arg Glu Lys Gln Leu Ser His Ser Leu Arg Ala Val Ser 100 105 110

Thr Asp Pro Pro His His Asp His Asp Glu Phe Cys Leu Met Pro 115 120 125

<210> 32

<211> 125

<212> PRT

<213> Mouse

<400> 32

Met Glu Ser Lys Glu Lys Arg Ala Val As
n Ser Leu Ser Met Glu As
n 1 5 10 15

Ala Asn Glu Glu Asn Glu Glu Lys Glu Gln Val Ala Asn Lys Gly Glu 20 25 30

Pro Leu Ala Leu Pro Leu Asp Ala Gly Glu Tyr Cys Val Pro Arg Gly 35 40 45

Asn Arg Arg Arg Phe Pro Val Arg Gln Pro Ile Leu Gln Tyr Arg Trp 50 55 60

Asp Ile Met His Arg Leu Gly Glu Pro Gln Ala Arg Met Arg Glu Glu 65 70 75 80

Asn Met Glu Arg Ile Gly Glu Glu Val Arg Gln Leu Met Glu Lys Leu 85 90 95

Arg Glu Lys Gln Leu Ser His Ser Leu Arg Ala Val Ser Thr Asp Pro $100 \hspace{1cm} 105 \hspace{1cm} 110$

Pro His His Asp His His Asp Glu Phe Cys Leu Met Pro 115 120 125

<210> 33

<211> 128

<212> PRT

<213> Mouse

<400> 33

Met Glu Ser Lys Asp Gln Gly Ala Lys Asn Leu Asn Met Glu Asn Asp 1 $$ 5 $$ 10 $$ 15

His Gln Lys Lys Glu Glu Lys Glu Glu Lys Pro Gln Asp Thr Ile Lys
20 25 30

Arg Glu Pro Val Val Ala Pro Thr Phe Glu Ala Gly Lys Asn Cys Ala 35 40 45

Pro Arg Gly Gly Arg Arg Phe Arg Val Arg Gln Pro Ile Ser His 50 55 60

Tyr Arg Trp Asp Leu Met His Arg Val Gly Glu Pro Gln Gly Arg Met 65 70 75 80

Arg Glu Glu Asn Val Gln Arg Phe Gly Glu Asp Met Arg Gln Leu Met 85 90 95

Glu Lys Leu Arg Glu Arg Gln Leu Ser His Ser Leu Arg Ala Val Ser 100 105 110

Thr Asp Pro Pro His His Asp His His Asp Glu Phe Cys Leu Met Pro 115 120 125

<210> 34

<211> 118

<212> PRT

<400> 34

Met Ala Ser Lys Val Lys Gln Val Ile Leu Asp Leu Thr Val Glu Lys $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Asp Lys Lys Asn Lys Lys Gly Gly Lys Ala Ser Lys Gln Ser Glu Glu 20 25 30

Glu Ser His His Leu Glu Glu Val Glu Asn Lys Lys Pro Gly Gly Asn 35 40 45

Val Arg Arg Lys Val Arg Arg Leu Val Pro Asn Phe Leu Trp Ala Ile 50 55 60

Pro Asn Arg His Val Asp His Ser Glu Gly Gly Glu Glu Val Gly Arg 70 75 80

Phe Val Gly Gln Val Met Glu Ala Lys Arg Lys Ser Lys Glu Gln Gln 85 90 95

Met Arg Pro Tyr Thr Arg Phe Arg Thr Pro Glu Pro Asp Asn His Tyr 100 105 110

Asp Phe Cys Leu Ile Pro 115

<210> 35

<211> 118

<212> PRT

<213> Mouse

<400> 35

Met Ala Ser Lys Phe Lys Gln Val Ile Leu Asp Leu Thr Val Glu Lys 1 5 10 15

Asp Lys Lys Asp Lys Arg Gly Gly Lys Ala Ser Lys Gln Ser Glu Glu 20 25 30

Glu Pro His His Leu Glu Glu Val Glu Asn Lys Lys Pro Gly Gly Asn 35 40 45

Val Arg Arg Lys Val Arg Arg Leu Val Pro Asn Phe Leu Trp Ala Ile 50 55 60

Pro Asn Arg His Val Asp Arg Asn Glu Gly Gly Glu Asp Val Gly Arg 65 70 75 80

Phe Val Val Gln Gly Thr Glu Val Lys Arg Lys Thr Thr Glu Gln Gln 95

Val Arg Pro Tyr Arg Arg Phe Arg Thr Pro Glu Pro Asp Asn His Tyr 100 105 110

Asp Phe Cys Leu Ile Pro 115

<210> 36

<211> 111

<212> PRT

<213> Mouse

<400> 36

Met Ala Asn Ile His Gl
n Glu Asn Glu Glu Met Glu Gl
n Pro Met Gl
n 10 $$ 15

Asn Gly Glu Glu Asp Arg Pro Leu Gly Gly Gly Glu Gly His Gln Pro 20 25 30

Ala Gly Asn Arg Arg Gly Gln Ala Arg Arg Leu Ala Pro Asn Phe Arg 35 40 45

Trp Ala Ile Pro Asn Arg Gln Ile Asn Asp Gly Met Gly Gly Asp Gly 50 55 60

Asp Asp Met Glu Ile Phe Met Glu Glu Met Arg Glu Ile Arg Arg Lys 70 75 80

Leu Arg Glu Leu Gln Leu Arg Asn Cys Leu Arg Ile Leu Met Gly Glu 85 90 95

Leu Ser Asn His His Asp His His Asp Glu Phe Cys Leu Met Pro 100 105 110

<210> 37

<211> 120

<212> PRT

<213> Mouse

<400> 37

Met Glu Gln Pro Leu Gln Asn Gly Gln Glu Asp Arg Pro Val Gly Gly 1 5 10 15

Gly Glu Gly His Gln Pro Ala Ala Ala Asn Asn Asn His Asn His Asn 20 25 30

His Asn His Asn His Ser His Asn His Asn His Arg Arg Gly Gln 35 40 45

Ala Arg Arg Leu Ala Pro Asn Phe Arg Trp Ala Ile Pro Asn Arg Gln 50 55 60

Met Asn Asp Gly Leu Gly Gly Asp Gly Asp Met Glu Met Phe Met 65 70 75 80

Glu Glu Met Arg Glu Ile Arg Arg Lys Leu Arg Glu Leu Gln Leu Arg 85 90 95

Asn Cys Leu Arg Ile Leu Met Gly Glu Leu Ser Asn His His Asp His 100 105 110

His Asp Glu Phe Cys Leu Met Pro 115 120

<210> 38

<211> 120

<212> PRT

<213> Mouse

<400> 38

Met Glu Gln Pro Leu Gln Asn Gly Gln Glu Asp Arg Pro Val Gly Gly 1 $$ 5 $$ 10 $$ 15

Gly Glu Gly His Gln Pro Ala Ala Ala Asn Asn Asn His Asn His Asn 20 25 30

His Asn His Asn His Ser His Asn His Asn His Arg Arg Gly Gln 35 40 45

Ala Arg Arg Leu Ala Pro Asn Phe Arg Trp Ala Ile Pro Asn Arg Gln 50 55 60

Met Asn Asp Gly Leu Gly Gly Asp Gly Asp Asp Met Glu Met Phe Met 65 70 75 80

Glu Glu Met Arg Glu Ile Arg Arg Lys Leu Arg Glu Leu Gln Leu Arg 85 90 95

Asn Cys Leu Arg Ile Leu Met Gly Glu Leu Ser Asn His His Asp His 100 105 110

His Asp Glu Phe Cys Leu Met Pro

<210> 39

<211> 111

<212> PRT

<213> Mouse

<400> 39

Met Glu Asn Val Pro Lys Glu Asn Lys Val Val Glu Lys Ala Pro Val 1 $$ 5 $$ 10 $$ 15

Gln Asn Glu Ala Pro Ala Leu Gly Gly Glu Tyr Gln Glu Pro Gly

20 25 30

Gly Asn Val Lys Gly Val Trp Ala Pro Pro Ala Pro Gly Phe Gly Glu 35 40 45

Asp Val Pro Asn Arg Leu Val Asp Asn Ile Asp Met Ile Asp Gly Asp 50 60

Gly Asp Asp Met Glu Arg Phe Met Glu Glu Met Arg Glu Leu Arg Arg 65 70 75 80

Lys Ile Arg Glu Leu Gln Leu Arg Tyr Ser Leu Arg Ile Leu Ile Gly 85 90 95

Asp Pro Pro His His Asp His His Asp Glu Phe Cys Leu Met Pro 100 105 110

<210> 40

<211> 13

<212> PRT

<213> Mouse

<400> 40

Arg Glu Ile Arg Arg Lys Leu Arg Glu Leu Gln Leu Arg 1 $$

<210> 41

<211> 13

<212> PRT

<213> Human

<400> 41

Arg Glu Ile Arg Arg Lys Leu Arg Glu Leu Gln Leu Arg 1 5 10

<210> 42

```
<211> 10
```

<212> PRT

<213> Mouse

<400> 42

Leu Pro Pro Leu Glu Arg Leu Thr Leu Asp 1 5 10

<210> 43

<211> 12

<212> PRT

<213> Mouse

<400> 43

Ala Leu Gl
n Lys Lys Leu Glu Glu Leu Glu Leu Asp 1 $$ 5 $$ 10

<210> 44

<211> 12

<212> PRT

<213> Mouse

<400> 44

Leu Thr Met Lys Glu Val Glu Glu Leu Glu Leu 1 5 10

<210> 45

<211> 10

<212> PRT

<213> Mouse

<400> 45

Leu Ala Leu Lys Leu Ala Gly Leu Asp Ile 1 5 10